

REMARKS

Reconsideration of the present application is respectfully requested in view of the following remarks. Prior to entry of this response, Claims 1-6 were pending in the application, of which Claims 1 and 4 are independent. In the Office Action dated December 22, 2003, Claims 1-6 were rejected under 35 U.S.C. §103(a). Following this response, Claims 1-6 remain in this application. Applicant hereby addresses the Examiner's rejections in turn.

I. Rejection of the Claims Under 35 U.S.C. § 103(a)

In the Office Action dated December 22, 2003, the Examiner rejected Claims 1-6 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,554,852 ("*Bright*") in view of U.S. Patent No. 6,037,717 ("*Maishev*"). Applicant respectfully traverses this rejection.

Claim 1 is patentably distinguishable over the cited art in that it recites, for example, a magnet for generating a magnetic field in a direction of connecting said filament and said reflector within said plasma production vessel, wherein a relation $L < 3.37B^{-1}\sqrt{(V_A)} \times 10^{-6}$ is satisfied. Claim 4 includes a similar recitation.

In contrast, and as admitted by the Examiner, *Bright* at least does not teach or suggest a magnet for generating a magnetic field in a direction of connecting said filament and said reflector within said plasma production vessel, wherein a relation $L < 3.37B^{-1}\sqrt{(V_A)} \times 10^{-6}$ is satisfied. (See Office Action, page 2, third paragraph, lines 5-6.) Furthermore, *Maishev* does not overcome *Bright*'s deficiencies. *Maishev* merely discloses permanent magnet (166) disposed in the plasma production vessel and that

by means of the permanent magnet, the Larmor radius (r_l) is significantly greater than the anode-cathode distance (d). (See col. 6, line 66 through col. 7, line 9.) Applicant respectfully submits that the aforementioned recitation in *Maishev* teaches the Larmor radius of an ion. In contrast, the claimed invention is directed to the Larmor radius of an electron, not an ion. Regarding the Larmor radius of an electron, *Maishev* discloses that it is approximately equal to the anode-cathode distance (d), not that a relation $L < 3.37B^{-1}\sqrt{(V_A)} \times 10^{-6}$ is satisfied. Like *Bright*, *Maishev* at least does not teach or suggest a magnet for generating a magnetic field in a direction of connecting said filament and said reflector within said plasma production vessel, wherein a relation $L < 3.37B^{-1}\sqrt{(V_A)} \times 10^{-6}$ is satisfied.

In sum, *Bright* and *Maishev*, either individually or in combination, at least do not disclose or suggest a magnet for generating a magnetic field in a direction of connecting said filament and said reflector within said plasma production vessel, wherein a relation $L < 3.37B^{-1}\sqrt{(V_A)} \times 10^{-6}$ is satisfied, as recited by Claim 1. Claim 4 includes a similar recitation. Accordingly, independent Claims 1 and 4 patentably distinguish the present invention over the cited art, and Applicant respectfully requests withdrawal of this rejection of Claims 1 and 4.

Dependent Claims 2-3 and 5-6 are also allowable at least for the reasons above regarding independent Claims 1 and 4, and by virtue of their respective dependencies upon independent Claims 1 and 4. Accordingly, Applicant respectfully requests withdrawal of this rejection of dependent Claims 2-3 and 5-6.

II. Conclusion

In view of the foregoing remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims. The preceding arguments are based only on the arguments in the Office Action, and therefore do not address patentable aspects of the invention that were not addressed by the Examiner in the Office Action. The claims may include other elements that are not shown, taught, or suggested by the cited art. Accordingly, the preceding argument in favor of patentability is advanced without prejudice to other bases of patentability.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: _____


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